**Impact of Cutting and Tailoring Training on Skill Development and Adoption among SC Farm Women**

**ABSTRACT**

The aim of present study was to examine the impact of “Cutting and Tailoring” skill based rural women training programme for SC farm women in terms of their technical knowledge, skill acquisition, satisfaction and adoption level on household/commercial. The finding highlighted the potential of such trainings in supporting entrepreneurship and uplifting the household livelihoods, thus providing the feedback to the educators and organizers. A 5-day training program was held in October, 2023 at Krishi Vigyan Kendra Damla, Yamunanagar (CCS Haryana Agricultural University, Hisar, Haryana) to train 60 SC farm women from 12 randomly selected villages. The pre and post training knowledge score were analyzed for significance with the help of ‘Z’ test. A significant positive difference was found between overall mean score of pre and post training technical knowledge. The mean score of the technical knowledge test of the respondents was 89.2 before training which increased to 95.4 after having training (6.2% increase).Out of the 16 components under skill acquisition, the Weighted Mean Score (WMS) of 10 components (Proper measurement, selection of fabric, drafting of garments, cutting of garments, stitching of various garments for all age groups, sleeves design, designing of yoke, maintenance of the machine, repairing and mending of clothes and work on automated stitching machine) was found to lie under fully skilled category. However, the WMS of the rest six components was found to lie under partially skilled. The trainees were highly satisfied with the coverage of subject matter having WMS (2.95), somewhat satisfied with provide physical facilities having WMS (2.19), highly satisfied with quality of trainers with WMS (2.89). 83.3 percent trainees adopted the training for household purpose whereas 16.7% trainees adopted the training for commercial purpose. In this way, a significant positive impact of training on skill & knowledge acquisition was observed which was clearly reflected by the adoption at household/commercial level.

 **Keywords:** Skill based rural women training, Technical Knowledge, Skill acquisition, Satisfaction and Adoption level.

1. **INTRODUCTION**

The participation of female in the field of entrepreneurship is always crucial for economy of any nation. According to the NITI Aayog report (2020), 70 central schemes across 15 ministries are supporting entrepreneurship, primarily led by the Ministry of Micro Small and Medium Enterprises (MSME), Agriculture, and Skill Development. At the state level, more than 400 schemes also promote entrepreneurship. Collectively, these efforts are empowering rural women across various sectors. Additionally, the government has launched various programs aimed at improving the employability of female workers. The Worker Population Ratio (WPR) rose from 46.8% in 2017-18 to 58.2% in 2023-24. An upward trend of educated women in workforce and consistent earnings growth among both self-employed and salaried women are encouraging signs of enhanced workforce participation, declined unemployment rates, and better opportunities for women reflect the country’s progress towards economic resilience and gender equality .It is evident from the above that in India, employment trends for women from 2017-18 to 2023-24 shows a positive picture of increased female workforce participation, highlighting their growing involvement in economic activities. Skill training programs have been initiated to combat rural poverty, boost human capital, and offer a skilled workforce to industry and services (Olagbaju, 2020). Historically, Vocational Education and Training (VET) policies have focused on a productivist paradigm, primarily aimed at increasing productivity and economic growth, enhancing workers’ employability, and facilitating job settlement for young people (Budría and Telhado‐Pereira, 2009; Anderson, 2009; McGrath, 2012). Women play a significant role in the clothing related decisions of the family in our country (Rana et al., 2015). They are engaged in domestic chores such as purchasing clothes for the family members, their care and maintenance, stitching of garments, knitting etc. But as the time has changed, the women need to acquire new knowledge and skills to keep up with the changing scenario, for which skill-based trainings are essential. Krishi Vigyan Kendras generally deal with training programmes related to needy areas to be served to both men and women (Karak, 2019). It offers need based skill based rural women training for farm women/farmers, rural youth and extension agents for enhancing of their livelihood. Women's income in a family is being increasingly recognized as critical to the family's economic, nutritional, and educational well-being.

Fig 1: Activities of KVKs

Krishi Vigyan Kendras (KVKs) have emerged as powerful agents of change, bridging the gap between science and traditional farming practices in India. Through extensive outreach, tailored solutions, sustainable practices, and technology-driven empowerment, KVKs empower farmers for a brighter, more resilient agricultural future. As they adapt to new challenges and technologies, KVKs will remain integral to India's quest for sustainable, prosperous, and environmentally conscious agriculture. Following the mandates of KVK, and keeping the skill requirements of cutting and tailoring among rural women in view, the skill/skill based rural women training was conducted by KVK, Damla, Yamunanagar. The assessment of the work done by any organization provides a deep insight about the scope of improvements, right direction as well as increase the confidence of the employees. Therefore, it was planned to assess the impact of cutting and tailoring training in the present study.

1. **MATERIAL AND METHODS**

The study was conducted by Krishi Vigyan Kendra, Damla, Yamunanagar, (CCSHAU, Hisar, Haryana) during 2023. For the study, out of total 7 blocks present in Yamunanagar district, four blocks were selected randomly namely Bilaspur, Jagadhri, Chachhrauli and Sadhaura. Twelve villages were selected randomly from the list of eligible villages i.e., Machchroli, Dadupur Head, Ismailpur, Rulha Kheri, Badanpuri, Gollanpur, Yasin Majra, Katarwali, Chuhadpur, Sultanpur, Nawan Shahar and Pheruwala.which was already compiled based on the specified criterion. Five SC women from each village were selected randomly for the purpose of participation in training programme. Thus, constituting a total sample of 60 SC farm women to observe the impact of “Cutting and Tailoring” skill based rural women training.

**Participant Eligibility** **Criteria:**

To be eligible for participation in the vocational training program, women had to meet thefollowing criteria:

• Belong to the Scheduled Caste community.

• Have basic educational qualification (5th pass), but school going students were intentionally excluded.

• Should be aged between 18 to 50 years.

According to the planned objectives, the data were collected with the help of the pre-structured interview schedule. Data analysis techniques included frequency, percentage, rank, weighted mean score (WMS), mean, and ‘Z’-test. Frequency is the total number of respondents against a particular class. Percentage is obtained by dividing the frequency of a particular class by the total respondents into 100. Rank is the arrangement of different classes based on their frequency.

For the purpose of calculation of weighted mean score, the weight was assigned to the level of skill/satisfaction. For highly skilled/fully satisfied ‘3’ weight was assigned. For partially skilled/ somewhat satisfied ‘2’ weight was assigned. For unskilled/unsatisfied ‘1’ weight was assigned.

WMS = $\frac{\sum\_{i=1}^{n}w\_{i}f\_{i}}{\sum\_{i=1}^{n}f\_{i}}$

Where n= Total number of levels

fi = Individual frequency

wi = Individual weight

Mean:The mean value was worked out by dividing the total by corresponding number of observations.

$\overbar{X} $*=* $\frac{Sum of Observations}{No. of Observations}$

‘Z’- test:A two-sample paired z test was used to check for significant difference between the means of two samples.

Z= $\frac{\overbar{x}\_{1}-\overbar{x}\_{2}}{\sqrt{\frac{σ\_{1}^{2}}{n\_{1}}+}\frac{σ\_{2}^{2}}{n\_{2}}}$

$\overbar{x}\_{1}$= mean score of pre-training

$\overbar{x}\_{2}$= mean score of post training, $n\_{1}$= no. of participants before training, $n\_{2}$= no. of participants after training, $σ\_{1}$= standard deviation before training, and $σ\_{2}$= standard deviation after training

1. **RESULTS AND DISCUSSION**
	1. **Socio-economic profile of the trainees**.

Socio-economic profile of the trainees., i.e., age, gender, caste, education, occupation of the family, type of family, size of family, respondent’s occupation and monthly family income information was collected to understand the major socio-economic status of the trainees (Table1). The data from the present study shows that three fourths of the trainees (75.0%) belonged to the age group of 18-27 years, 16.7 % trainees belonged to the age group of 28-37 years and 8.3% were of 38 and above years age.

It was observed that majority of the trainees (88.3%) had primary education. The Highest education of the trainees (11.7%) was observed high school. Seventy percent of the trainee’s family occupation was labor. The study indicated that most of trainees (96.7%) belonged to nuclear families and the rest of the trainees had joint families (3.3%). Most of the trainees (81.7%) had medium family size. Maximum trainees’ own occupation was housewife (85%) and their monthly income (Rs) was between 12000 & 24000. Kiran Bala et.al. (2017) also reported that most of the trainees (73.3%) were of younger age group, educated upto secondary school (38.8%). Nearly half of the trainees (47.8%) had nuclear family’s size. Around one third trainees (74.5%) had agricultural laborer as their main family occupation and monthly income upto Rs. 5,000 (55.6%).

**Table 1: Socio-economic profile of the Trainees n=60**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sr. No.** | **Particulars** | **Categories** | **Frequency**  | **Percentage (%)** |
| 1. | Age | 18-27 years | 45 | 75.0 |
| 28-37 years | 10 | 16.7 |
| 38 and above years | 05 | 08.3 |
| 2. | Gender  | Female | 60 | 100 |
| 3. | Caste | SC/ST | 60 | 100 |
|  | Education | Primary | 53 | 88.3 |
| High school | 07 | 11.7 |
| 5. | Family occupation  | Farming | 18 | 30.0 |
| Labor  | 42 | 70.0 |
| 6. | Type of family  | Nuclear | 58 | 96.7 |
| Joint | 02 | 03.3 |
| 7. | Size of family | Upto 3 members (S) | 08 | 13.3 |
| 4-6 members(M) | 49 | 81.7 |
| More than 6 members(L) | 03 | 05.0 |
| 8. | Respondent’s occupation | Housewife | 51 | 85.0 |
| labor | 09 | 15.0 |
| 9. | Monthly family income (Rs) | <12000 (Low) | 12 | 20.0 |
| 12000to 24000 (Medium) | 48 | 80.0 |

**Source of information used by the trainees**

Table 2 revealed that under localite and cosmopolite sources of information, majority of the trainees received information from friends (53.4%) followed by other govt. officials and relatives 33.3% and 13.3% respectively. The findings were in trend with Goswami et al. (2019) and Khan et.al (2023) who also found that friends were the main source of information followed by neighbors.

**Table 2: Source of information used by the trainees n=60**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sr. No.** | **Sources** | **Category** | **Frequency** | **Percentage (%)** |
| **1.** | Localite | Friends/Relatives  | 32 | 53.4 |
| **2.** | Cosmopolite | University personnel | 08 | 13.3 |
| Other Govt. officials | 20 | 33.3 |

\*Multiple-responses

**3.2 Impact on knowledge acquisition**

Pre- exposure and post exposure mean scores of knowledge were computed and z-test was applied for all the sub-components of cutting and tailoring which are presented as under Table 3. A significant gain in overall technical knowledge was recorded with p value 1.59266E-18. In case of machine handling, cutting and precautions components, the improvement was found statistically non-significant. Overall, the score of the knowledge test of the respondents was 89.2 which increased to 95.4 after having training. Thus, there was an increase of 6.2% in knowledge. The findings of the present study were in line with the study conducted by Manisha Bhatia and Rampal (2019) that the scores of the knowledge test of the trainees were 16.3 which increased to 23.9 after imparting training thus the gain in scores was 7.39. The impact of the training programmes can be viewed from the fact that the percent improvement in the scores of the trainees was 45.7. This is indicative that the training programmes have been effective in improving the knowledge of the trainees.

**Table 3: Impact on knowledge acquisition n=60**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | **Knowledge** |  |  |
| **Sr.No** | **Components** | **Pre-Exposure****(%)** | **Post- Exposure (%)** | **Gain in Knowledge (%)** | **P Value****(Z-test)** |
| 1 | Machine parts Name | 95.0 | 99.3 | 4.3 | 0.00818 |
| 2 | Machine Handling | 96.3 | 99.0 | 2.6 | 0.073345 |
| 3 | Machine care | 95.3 | 99.6 | 4.3 | 0.00818 |
| 4 | Proper Measurements | 98.0 | 100 | 2.0 | 0.013036 |
| 5 | Drafting | 94.0 | 100 | 6.0 | 0.000112 |
| 6 | Cutting | 94.0 | 98.6 | 4.6 | 0.051381 |
| 7 | Stitching | 98.3 | 100 | 1.6 | 0.024055 |
| 8 | Designing | 58.0 | 78.3 | 20.3 | 8.8639E-11 |
| 9 | Surface enrichments  | 73.6 | 77.0 | 3.3 | 0.011184 |
| 10 | Precautions | 99.3 | 100 | 0.6 | 0.159036771 |
| 11 | Entrepreneurial skills and education | 79.6 | 98.3 | 18.6 | 1.29325E-14 |
|  | Overall  | 89.2 | 95.4 | 6.2 | 1.59266E-18 |

**3.3 Impact on skill acquisition**

Out of the 16 components under skill acquisition, the weighted mean score (WMS) of 10 components (Proper measurement, selection of fabric, drafting of garments, cutting of garments, stitching of various garments for all age groups, sleeves design, designing of yoke, maintenance of the machine, repairing and mending of clothes and work on automated stitching machine) was found to lie under fully skilled category. However, the WMS of the remaining six components was found to lie under partially skilled after completing the training. The data indicates that automated stitching machine related skill acquired rank I calculated on the basis of WMS. Repairing and mending of clothes and stitching of various garments for all age groups got rank II. Necklines design, collars design and fullness and dart manipulation with rank XIII and XIV respectively (Table 4). The similar trend was observed in pooled sample also. Thus, it can be inferred that women acquired skill when they were exposed to training. Findings of Preeti (2014) [8] also coincide with the findings of present study.

**Table 4: Impact on skill acquisition n=60**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sr. N** | **Skill acquisition** | **Fully Skilled (3)** | **Partially Skilled (2)** | **Unskilled****(1)** | **WMS** | **Rank** |
| 1 | Proper measurement | 55 | 05 | 00 | 2.91 | III |
| 2 | Selection of fabric | 52 | 08 | 00 | 2.86 | V |
| 3 | Drafting of garments | 40 | 12 | 08 | 2.53 | VI |
| 4 | Cutting of Garments | 38 | 08 | 14 | 2.40 | IX |
| 5 | Layout design for boutique | 30 | 18 | 12 | 2.30 | XI |
| 6 | Stitching of various garments for all age groups | 58 | 02 | 00 | 2.96 | II |
| 7 | Fabric Enrichment | 30 | 20 | 10 | 2.33 | X |
| 8 | Necklines design | 25 | 15 | 20 | 2.08 | XIII |
| 9 | Sleeves design | 30 | 30 | 00 | 2.50 | VII |
| 10 | Collars design | 20 | 25 | 15 | 2.08 | XIII |
| 11 | Designing of Yoke | 38 | 12 | 10 | 2.46 | VIII |
| 12 | Fullness and Dart Manipulation | 25 | 10 | 25 | 2.00 | XIV |
| 13 | Quilting technique | 22 | 28 | 10 | 2.20 | XII |
| 14 | Maintenance of the machine | 52 | 07 | 03 | 2.88 | IV |
| 15 | Repairing and mending of clothes | 58 | 02 | 00 | 2.96 | II |
| 16 | Work on automated stitching machines | 60 | 00 | 00 | 3.00 | I |

Note: Unskilled 1.00-1.66, Partially skilled 1.67-2.33, Fully skilled 2.34-3.00

**3.4 Satisfaction level of the trainees towards various aspects of training**

It can be seen from the Table-5 that cent percent (100%) of the trainees was highly satisfied with the comprehensiveness of training content with WMS 3.00 and secured Rank I. Most of the trainees also highly satisfied with relevance of content with WMS 2.96, secured rank II. Rest of the trainees highly satisfied with duration of the training WMS 2.88 and secured rank III. All of the trainees (100%) highly satisfied with training aids and equipment with WMS 3.00, secured rank I. Maximum of the trainees somewhat satisfied with location with WMS 2.13 and got rank II. Most of the trainees with WMS 1.46 not satisfied with location of the training and secured rank III. All of the trainees agree with behavior of expert with WMS 3.00, rank I followed by expertise of the subject with WMS 2.96, rank II. Most of the trainees liked the communication skills of the expert and used teaching aids for the training with WMS 2.85 and 2.78 and secured rank III and IV respectively.

**Table 5: Satisfaction level of the trainees towards various aspects of training n=60**

|  |  |  |  |
| --- | --- | --- | --- |
| **Aspects of Training** | **Responses** |  |  |
|  | **Highly Satisfied****(3)** | **Somewhat Satisfied****(2)** | **Not satisfied****(1)** | **WMS** | **Rank** |
| 1. **Subject matter of training**
 |
| Relevance of content | 58 | 02 | 00 | 2.96 | II |
| Comprehensiveness of Training content  | 60 | 00 | 00 | 3.00 | I |
| Duration | 53 | 07 | 00 | 2.88 | III |
| Overall |  |  |  | 2.95 |  |
| 1. **Physical facilities**
 |
| Sitting arrangement | 08 | 52 | 00 | 2.13 | II  |
| Convenient location | 00 | 28 | 32 | 1.46 | III  |
| Training Aids and Equipment  | 60 | 00 | 00 | 3.00 | I |
| Overall |  |  |  | 2.19 |  |
| 1. **Quality of trainer**
 |
| Teaching Aids | 50 | 07 | 03 | 2.78 | IV |
| Expertise of the subject | 58 | 02 | 00 | 2.96 | II |
| Communication Skills | 52 | 07 | 01 | 2.85 | III |
| Behavior of expert | 60 | 00 | 00 | 3.00 | I |
| Overall |  |  |  | 2.89 |  |

Note: Not satisfied 1.00-1.66, Somewhat Satisfied 1.67-2.33, Highly Satisfied 2.34-3.00

**3.5 Training adopted at household/ commercial purpose by the trainees**

Fig.2 shows that maximum trainees (83.3%) adopted the training for household purpose and 16.7 percent trainees adopted the training for commercial purpose. Similar results were evident by the Charanjeet Kaur and Lavleesh Garg (2017) that majority of the trainees had adopted the skill based rural women training on domestic level. The study also revealed that about 80 per cent of the trainees who have received “cutting and tailoring” training had adopted the occupation on self-sustainable level means for his house hold level and only 13.3 per cent had adopted as commercial level because they have less resources and cannot afford to spend more income on commercial level.

**3.6 Reasons for attending the training**

Table 6 shows that most of the trainees (86.7%) were attended the training due to personal interest followed by 75% of the trainees wanted to uplift their status in the society. Twenty percent trainees attended the training to accompany the friends. The percentage candidates who joined the training for enhancing the skill and utilize the leisure time were 16.7 and 6.7 respectively.

**Table 6:** **Reasons for attending the training** **n=60**

|  |  |  |  |
| --- | --- | --- | --- |
| **Sr.No.** | **Reasons** | **Frequency** | **Percentage (%)** |
| 1 | To Utilize the leisure time | 04 | 06.7 |
| 2 | To enhance the Skill | 10 | 16.7 |
| 3 | To start own business | 08 | 13.3 |
| 4 | Due to personal interest | 52 | 86.7 |
| 5 | To accompany the friends | 12 | 20.0 |
| 6 | Status in the society | 45 | 75.0 |

* Multi response
1. **CONCLUSION**

The present study estimated 6.2% increase in the score of the knowledge test of the respondents was an increase of 6.2%. Out of the 16 components under skill acquisition, the weighted mean score (WMS) of 10 components was found to lie under fully skilled category. Ten out of 60 candidates adopted the training at commercial level whereas remaining all candidates adopted it at household level. Forty-five candidates joined the training to raise the status in the society which was certainely uplifted due to acquired skills & knowledge apart from economical benefits. Low commercial level adoption provides a insight for further indepth study about its reasons. Thus, significant positive impact of training on skill & knowledge acquisition thereafter ultimately adoption of these qualities into their professional and social life clearly indicates that these kind of skill trainings are useful for social and economical upliftment of SC farm women.

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**DISCLAIMER (ARTIFICIAL INTELLIGENCE)**

Author(s) hereby declare that no generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during writing or editing of manuscripts.

**COMPETING INTERESTS**

Authors have declared that no competing interests exist.

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